

IN THE CLAIMS

Please amend the claims as set out in the following listing of the claims. This claim listing replaces and supersedes all prior listings of the claims:

1. (Currently Amended) A method for manufacturing a semiconductor substrate characterized by comprising:

~~a mask forming step of forming a mask on a major surface of a single-crystal silicon substrate;~~

~~an ion implantation step of implanting oxygen ions to the major surface;~~

~~a surface protection layer forming step of forming a surface protection layer that blocks oxygen on the major surface;~~

~~a heat treatment step of forming a silicon dioxide layer in the single-crystal silicon substrate by heat treatment; and~~

~~a removal step of removing the mask and the surface protection layer from the single-crystal silicon substrate, wherein~~

the silicon dioxide layer has a pattern corresponding to presence/absence and thickness of the mask formed on the major surface of the single-crystal silicon substrate, the pattern having a relatively short distance from the major surface in an area where the mask has been formed and a relatively long distance from the major surface in an area where the mask has not been formed.

2-3 (Canceled).

4. (Original) The method for manufacturing a semiconductor substrate as claimed in claim 1, characterized in that the mask is made of silicon dioxide.

5. (Currently Amended) The method for manufacturing a semiconductor substrate as claimed in claim 4, characterized in that the ~~mask forming step includes a step of~~ is formed by forming a silicon oxide film with a desired thickness by thermally oxidizing the single-crystal silicon substrate, and ~~a step of~~ removing a part of the silicon oxide film by etching so that a mask of a desired pattern is formed on the major surface.

6. (Original) The method for manufacturing a semiconductor substrate as claimed in claim 4, characterized in that when the thickness of the mask is Y (nm) and acceleration energy in the ion implantation step is X (keV), a condition of $Y/X < 2$ is satisfied.

7. (Currently Amended) The method for manufacturing a semiconductor substrate as claimed in claim 1, characterized in that the ~~step of forming the surface protection layer includes a step of~~ is formed by forming a silicon dioxide layer on the major surface, and ~~a step of~~ forming a silicon nitride layer thinner than the silicon dioxide layer, on the silicon dioxide layer.

8-10 (Canceled).

11. (Currently Amended) A method for manufacturing a semiconductor substrate characterized by comprising:

~~a mask forming step of~~ forming a mask on a major surface of a single-crystal silicon substrate;

~~an ion implantation step of~~ implanting oxygen ions to the major surface;

~~a surface protection layer forming step of~~ forming a surface protection layer that blocks oxygen on the major surface;

a ~~heat treatment step~~ of forming a silicon dioxide layer in the single-crystal silicon by heat treatment;

a ~~removal step~~ of removing the mask and the surface protection layer; and

a ~~polishing step~~ of polishing the major surface by a predetermined quantity;

wherein the silicon dioxide layer has such a pattern such that its distance from the major surface in an area where the mask has been formed on the major surface is relatively short while its distance from the major surface in an area where the mask has not been formed is relatively long, and the quantity of polishing ~~at the polishing step~~ is equal to the quantity of removal of the silicon dioxide layer formed in the area where the mask has been formed.

12. (Currently Amended) The method for manufacturing a semiconductor substrate as claimed in claim 11, characterized in that the quantity of polishing ~~at the polishing step~~ is such a quantity that the silicon dioxide layer formed in the area where the mask has not been formed is not reached.

13. (Currently Amended) The method for manufacturing a semiconductor substrate as claimed in claim 11, characterized by ~~further comprising a step of~~ forming single-crystal silicon on the major surface after polishing the major surface.

14. (Original) The method for manufacturing a semiconductor substrate as claimed in claim 11, characterized in that the mask is made of silicon dioxide.

15. (Currently Amended) The method for manufacturing a semiconductor substrate as claimed in claim 14, characterized in that the mask ~~forming step includes a step of~~ is formed by

forming a silicon oxide film with a desired thickness by thermally oxidizing the single-crystal silicon substrate, and a step of removing a part of the silicon oxide film by etching so that a mask of a desired pattern is formed on the major surface.

16. (Original) The method for manufacturing a semiconductor substrate as claimed in claim 14, characterized in that when the thickness of the mask is Y (nm) and acceleration energy in the ion implantation step is X (keV), a condition of $Y/X < 2$ is satisfied.

17. (Currently Amended) The method for manufacturing a semiconductor substrate as claimed in claim 11, characterized in that the surface protection layer ~~forming step includes a step of is formed by~~ forming a silicon dioxide layer on the major surface, and ~~a step of~~ forming a silicon nitride layer thinner than the silicon dioxide layer, on the silicon dioxide layer.

18-20 (Canceled).